

## **SUMMARY OF THE INVENTION**

A passenger or cargo elevator based on the use of chains, counterweights and servomotors  
5 that represents an improved version over traditional elevators for cargo or for passengers.  
The improvements consist in the substitution of traction cables by traction chains, but in a  
closed loop wherein the chains serve both to pull the elevator cabin up and to also pull  
down the counterweight. Through this means we obtain a better performance in the latter  
and consequently we can have counterweights that not only exceed the cabin's weight but  
10 we can also consider additional counterweights for up to 50% of the load one plans to lift  
without having the problem of sudden pulls on the chains due to inertia during the braking  
process. The traction motor equipment used are planetary type speed reducers which have  
greater efficiency and precision and are coupled to servomotors that allow for complete  
accuracy in the programming of the movements that may be required for the elevator. The  
15 control system is based on a programmable logic controller (PLC) and on the servomotor  
controller which, together with the servomotor encoders, provide the precise positioning as  
well as the speed and torque pre-programmed in an optimal manner, so as to have the best  
possible system performance and obtain the compensations that might at one or another  
time be required.